

REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. In the Office Action mailed December 31, 2007, claims 1-4 and 6-27 have been rejected. In response, the Applicants have submitted the following remarks. Accordingly claims 1-4 and 6-27 are still pending. Favorable reconsideration is respectfully requested in view of the remarks below.

Rejections Under 35 U.S.C. §103

Claims 1-4, 6, 8 and 10-27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0188214 to Mischyniski (hereinafter Mischyniski) in view of U.S. Patent No. 5,277,181 to Selker (hereinafter Selker). The Applicants respectfully disagree with this rejection.

Within the Office Action, it is stated that Mischyniski teaches that the step of determining as taught and claimed in the present application specifically including the step of comparing the at least one parameter value of the biomedical signal with all corresponding parameter values stored in a database, wherein all corresponding parameter values in the database are collected from a plurality of patients. The Office Action cites Mischyniski, paragraphs 248 and 249. It is also stated within the Office Action that the Mischyniski reference teaches displaying the likelihood on a graphical user interface (GUI), wherein the at least one parameter of the patient is entered in a field box defined by a lead of measured parameter types in a type of parameter value (Mischyniski, paragraph 72). The Applicants respectfully disagree with this assertion.

The Mischyniski reference teaches a system and process for analyzing a medical condition of a user, wherein a digital signal from a plurality of ECG sensors on a patient is used to create a QRS wave, and one or more points are extracted from this QRS wave and are used to form a QRS complex wave (Mischyniski, abstract). A plurality of parameters are calculated from these points from the single user on the QRS wave (id.). Referring to the paragraph cited by the Examiner, these plurality of preset parameters are

determined through a series of former users, and the preset values for these plurality of parameters are determined by **the average readings for a series of patients** experiencing abnormal medical conditions (Misczyniski, paragraph 248, lines 15-22). In essence, the Misczyniski reference teaches comparing a patient's parameters to an average of past patients parameters. Misczyniski does not teach comparing the at least one parameter of the biomedical signal **with all corresponding parameter values stored in a database**.

Referring to paragraph 2 of Misczyniski, it is again stated in the Office Action that Misczyniski teaches displaying the likelihood on a graphical user interface wherein the parameters entered in a field box defined by a lead of measured parameter values and a type of parameter value. In paragraph 72 of Misczyniski, it is stated that a display connects an information processing device 200 that allows a user to see information that is processed in the information processing device 200, and that the display can be either a standard monitor coupled to a personal computer or a customized display for a portable version of information processing device 200. However, it is not stated in paragraph 72, nor taught anywhere within the Misczyniski reference, that Misczyniski teaches a graphical user interface, that includes a plurality of field boxes, **wherein values of the patient are entered and defined by the leads of the measured ECG parameters on a vertical access and the types of parameter values on a horizontal access**. In fact, Misczyniski does not teach any sort of graphical user interface at all, but only a display for showing the workings of the information processing device 200.

Lastly with respect to Misczyniski, it is stated in the Office Action that Misczyniski does not expressly teach calculating a percentage representing a likelihood of a patient's heart condition.

As discussed in the previous Office Action, the Selker reference teaches simply a system that collects an amount of data for a group of patients for any one physiological parameter, and keeps track of such information and displays the information as instructed by a user of the system. This is supported by the figures associated with the Selker reference and the cited columns of the Selker reference in the Office Action.

by a user of the system. This is supported by the figures associated with the Selker reference and the cited columns of the Selker reference in the Office Action.

However, it is not taught in Selker that the system and method compares the parameters of the biomedical signal with all corresponding parameter values stored in the database and calculates a percentage representing the likelihood wherein all the corresponding parameter values in the database are collected from a plurality of patients. In fact, the Selker reference collects data from an individual patient, processes that data through the predictive instrument, and stores this information in the database, where it may be called upon later for use in an aforementioned report (Selker, column 4, lines 67 through column 5, line 16). Further, Selker does not teach the graphical user interface wherein the at least one parameter of the patient is entered in a field box defined by a lead of measured parameter values and a type of parameter value.

Therefore, in summing up the above description of the prior art, neither Mischyniski or Selker teach the step of comparing the at least one parameter value of the biomedical sensor with **all corresponding parameter values stored in a database, wherein all corresponding parameter values in the database are collected from a plurality of patients**, nor the graphical user interface, wherein the at least one parameter of the patient is entered in a field box defined by a lead of measured parameter values and a type of parameter value, nor does their combination make these features obvious.

In contrast to the teachings of Mischyniski, Selker, and their combination, the method and system of the present invention determines the likelihood of the presence of a condition of a patient's heart by comparing the at least one parameter value of a biomedical signal of the patient to **all corresponding parameter values stored in a database**, wherein all corresponding parameter values in the database are collected from a plurality of patients. The database of the present invention stores parameter values of ECGs (biomedical signals) of a large number of patients, and **compares all of the parameter values to the subject patient's parameter value (present invention, paragraphs 21-22).**

The graphical user interface of the present invention **includes a plurality of field boxes, wherein values of the patient are entered and are defined by the leads of the measured ECG parameters on a vertical axis and the types of parameter values on the horizontal access. Once the patient's parameter values are entered in the appropriate field boxes, a "ready" button is utilized to calculate the likelihood of the presence of a condition of the patient's heart, which are then displayed on the graphical user interface.** Neither Mischyniski, Selker, nor their combination teaches nor makes obvious the comparing step, nor the graphical user interface.

The independent claim 1 is directed to a method for determining the presence of a condition of a patient's heart, the method comprising the steps of: reading at least one parameter value of a bio-medical signal of a patient, and determining the likelihood of the presence of a condition of a patient's heart based on the at least one parameter value, the step of determining including the step of comparing the at least one parameter value of the bio-medical signal with all corresponding parameter values stored in a database and calculating a percentage representing the likelihood, wherein all corresponding parameter values in the database are collected from a plurality of patients, and displaying the likelihood on a graphical user interface (GUI), wherein the at least one parameter of the patient is entered in a field box defined by a lead of measured parameter values and a parameter value. As described above, neither Mischyniski, Selker nor their combination teach or make obvious the comparing step nor the graphical user interface as described and claimed in the present invention.

Claims 2-4 and 6 are dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Mischyniski, Selker, and their combination. Accordingly, claims 2-4 and 6-7 are also allowable as being dependent upon an allowable base claim.

The remainder of the independent claims, including independent claims 8, 12, 17 and 23 have been amended to include the limitations as discussed above with respect to claim 1. For at least these reasons, the Applicants respectfully submit that the

independent claims 8, 12, 17 and 23 are all allowable as they are not anticipated by, nor made obvious by the Mischyniski and Selker references.

Claims 10-11 are dependent upon the independent claim 8. As discussed above, the independent claim 8 is allowable over the teachings of Mischyniski, Selker, and their combination. Accordingly, claims 9-11 are also allowable as being dependent upon an allowable base claim.

Claims 13-16 are dependent upon the independent claim 12. As discussed above, the independent claim 12 is allowable over the teachings of Mischyniski, Selker, and their combination. Accordingly, claims 13-16 are also allowable as being dependent upon an allowable base claim.

Claims 18-22 are dependent upon the independent claim 17. As discussed above, the independent claim 17 is allowable over the teachings of Mischyniski, Selker, and their combination. Accordingly, claims 18-22 are also allowable as being dependent upon an allowable base claim.

Claims 24-27 are dependent the independent claim 23. As discussed above, the independent claim 23 is allowable over the teachings of Mischyniski, Selker and their combination. Accordingly, claims 24-27 are also allowable as being dependent upon an allowable base claim.

Claims 7 and 9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mischyniski in view of U.S. Patent Publication No. 2002/0038277 to Fey (hereinafter Fey). Claims 7 and 9 are dependent upon the independent claims and 1 and 8 respectively. As discussed above, the independent claims 1 and 8 are allowable over the teachings of Mischyniski, Selker, and their combination. Accordingly, claims 7 and 9 are also allowable as being dependent upon an allowable base claim.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at

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414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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